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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/603,154	06/23/2000	Balachander Krishnamurthy	1999-0507	2026

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Samuel H Dworetsky
AT&T Corp
P O Box 4110
Middletown, NJ 07748-4110

EXAMINER

FLYNN, KIMBERLY D

ART UNIT	PAPER NUMBER
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2153

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/603,154

Applicant(s)

KRISHNAMURTHY ET AL.

Examiner

Kimberly D Flynn

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 and 17-24 is/are allowed.
- 6) ☒ Claim(s) 14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to an Amendment filed July 30, 2004. Claims 1-12 and 14-24 are presented for further consideration.

Response to Amendment

2. The indicated allowability of claims 14-16 is withdrawn in view of the newly discovered reference(s) to Nelson (U.S. Patent No. 5,835,720; hereinafter Nelson) in view of Lakey (U.S. Patent No. 6,078,954; hereinafter Lakey). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 14-16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson (U.S. Patent No. 5,835,720; hereinafter Nelson) in view of Lakey (U.S. Patent No. 6,078,954; hereinafter Lakey).

In considering claim 14, the combined system of Nelson and Lakey discloses an IP apparatus and method comprising:

- creating a unified table of routing address information (col. 3, lines 59-61);

- comparing one or more client addresses with the unified routing table (col. 3, lines 64-67);
- clustering together client IP addresses, which belong to the common network, into client clusters (col. 4, lines 1-12), wherein the routing address information is prefix/netmask information extracted from a plurality of routing tables (col. 3 lines 20-29).

While Nelson discloses comparing the IP address to the addresses in the IP address table, Nelson does not disclose wherein the comparing is done in order to determine which client IP addresses belong to a common network. Nonetheless assigning clients to specific groups based upon their IP addresses is well known as evidenced by Lakey. In similar art, Lakey discloses a system and method that manages the assignment of multicast addresses for each client and places each client into a specific multicast group based upon their multicast addresses including the following steps: the server queries a database containing specific information about the client (client informational records containing information such as the IP address for each client, col. 3, lines 42-45), the database returns the information about the client to the server; and the server assigns the client to the specific groups based upon the information received in the data base (col. 2, lines 14-20).

It would have been obvious to a person having ordinary skill in the art to modify the system disclosed by Nelson to include the steps of grouping clients according to their IP addresses in specific groups in order for the servers to more efficiently service their

specific network groups and for the network groups to receive data that is transferred to that specific target group. Therefore, the claimed limitations would have been obvious modifications to the system disclosed by Nelson.

In considering claim 15, the combined system of Nelson and Lakey discloses an IP apparatus and method comprising:

- creating a unified table of routing address information (col. 3, lines 59-61);
- comparing one or more client addresses with the unified routing table (col. 3, lines 64-67);
- clustering together client IP addresses, which belong to the common network, into client clusters (col. 4, lines 1-12), wherein the common network is defined by a common longest matching prefix shared by each of the client IP addresses.

While Nelson discloses comparing the IP address to the addresses in the IP address table, Nelson does not disclose wherein the comparing is done in order to determine which client IP addresses belong to a common network. Nonetheless assigning clients to specific groups based upon their IP addresses is well known as evidenced by Lakey. In similar art, Lakey discloses a system and method that manages the assignment of multicast addresses for each client and places each client into a specific multicast group based upon their multicast addresses including the following steps: the server queries a database containing specific information about the client (client informational records containing information such as the IP address for each client, col. 3, lines 42-45), the database returns the information about the client to the server; and the

server assigns the client to the specific groups based upon the information received in the data base (col. 2, lines 14-20).

It would have been obvious to a person having ordinary skill in the art to modify the system disclosed by Nelson to include the steps of grouping clients according to their IP addresses in specific groups in order for the servers to more efficiently service their specific network groups and for the network groups to receive data that is transferred to that specific target group. Therefore, the claimed limitations would have been obvious modifications to the system disclosed by Nelson.

In considering claim 16, the combined system of Nelson and Lakey discloses an IP apparatus and method comprising:

- creating a unified table of routing address information (col. 3, lines 59-61);
- comparing one or more client addresses with the unified routing table (col. 3, lines 64-67);
- clustering together client IP addresses, which belong to the common network, into client clusters (col. 4, lines 1-12),
- wherein creating a unified table of routing address information includes:
extracting a plurality of entries from a plurality of routing tables; unifying the plurality of entries into a consistent format; and merging the plurality of entries into a unified table (col. 6, lines 55-67 and col. 7, lines 1-16).

While Nelson discloses comparing the IP address to the addresses in the IP address table, Nelson does not disclose wherein the comparing is done in order to determine which client IP addresses belong to a common network. Nonetheless assigning clients to specific groups based upon their IP addresses is well known as evidenced by Lakey. In similar art, Lakey discloses a system and method that manages the assignment of multicast addresses for each client and places each client into a specific multicast group based upon their multicast addresses including the following steps: the server queries a database containing specific information about the client (client informational records containing information such as the IP address for each client, col. 3, lines 42-45), the database returns the information about the client to the server; and the server assigns the client to the specific groups based upon the information received in the data base (col. 2, lines 14-20).

It would have been obvious to a person having ordinary skill in the art to modify the system disclosed by Nelson to include the steps of grouping clients according to their IP addresses in specific groups in order for the servers to more efficiently service their specific network groups and for the network groups to receive data that is transferred to that specific target group. Therefore, the claimed limitations would have been obvious modifications to the system disclosed by Nelson.

Allowable Subject Matter

5. Claims 1-12, and 17-24 are allowed.
6. The following is a statement of reasons for the indication of allowable subject matter:

Applicant's invention is drawn to a method of clustering a plurality of client IP addresses within a distributed information network. Applicant's independent claims 1, 8, and 20 each recite, *inter alia*, generating a unified prefix/netmask table from a plurality of network routing table prefix/netmask entries; comparing each of the plurality of client IP addresses with the unified prefix/netmask table to determine a common prefix between each of the plurality of client addresses and at least one of the entries in the unified prefix/netmask table; and grouping client IP addresses which share a common prefix into a network client cluster. Applicant's invention of claims 1, 20 and 8 comprise a particular combination of elements, which is neither taught nor suggested by the prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly D Flynn whose telephone number is 703-308-7609. The examiner can normally be reached on M-F 8:30 - 5:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 703-305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimberly D Flynn
Examiner
Art Unit 2153

KDF


ZARNI MAUNG
PRIMARY EXAMINER